

## **REMARKS / ARGUMENTS**

### **Status of Claims**

Claims 1-33 are pending in the application. Claims 7-12 are allowed. Claims 1-6, 13-27 and 31-33 stand rejected. Claims 28 and 29 are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant appreciates the Examiner's notation of the allowable claims. Applicant has amended Claims 1, 18 – 27 and 29 – 31, cancelled Claim 28, leaving Claims 1 – 27 and 29-33 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §112, second paragraph and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

### **Claim Objections**

Claims 28 and 29 are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has amended Claim 18 to incorporate limitations from Claim 28. Accordingly, Applicant respectfully request the Examiner to reconsider and withdraw these objections, which Applicant consider to be overcome.

### **Rejections Under 35 U.S.C. §112, Second Paragraph**

Claims 18-30 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

The Examiner comments that claims 18-30 utilize to statutory means, an apparatus (a program storage medium) and a method.

Applicant traverses this rejection for the following reasons.

A claim to a device, apparatus, manufacture, or composition of matter may contain a reference to the process in which it is intended to be used without being objectionable under 35 U.S.C. 112, second paragraph, so long as it is clear that the claim is directed to the product and not the process. [MPEP 2173.05(p)]. Further, “. . . computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. Sec. 101 and must be examined under 35 U.S.C. Secs. 102 and 103.” [*In re Beauregard*, 53 F.3d 1583, U.S.P.Q.2d 1383 (Fed. Cir. 1995)]. Finally, The test for definiteness under 35 U.S.C. 112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” [*Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986)].

In the office action, the Examiner states that Claims 18-30 utilize an apparatus and a method. By this amendment, Applicant has amended Claims 18 – 30 to properly and clearly claim a program storage medium. Accordingly, Applicant submits that since Claims 18-30 are directed to a device that contains a reference to a process, the claims are no longer objectionable under 35 U.S.C. § 112. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection, which Applicant considers to be traversed.

#### **Rejections Under 35 U.S.C. §103(a)**

Claims 1-5, 17-22 and 30-33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. (U.S. Patent No. 7391895, hereinafter Wang).

Claims 1-6, 13-16 and 23-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wang in view of Hong et al. (U.S. Patent Publication No. 2002/0037103, hereinafter Hong, collectively Wang and Hong referred to as the “References”).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

In the Office Action, the Examiner states that Wang calculates a transition region. [*paper 20089724*, Page 3, Paragraph 2]. Applicant respectfully disagrees. Applicant finds that Wang discloses the defining of a foreground region and a background region. Wang then looks for holes or “gaps” which are pixels that have not been assigned to either the foreground region or the background region but are in the proximity of the transition between the foreground and the background regions. These gaps are then assigned to either the foreground or background regions. The process taught by Wang then repeats until all of the gaps are removed. [Wang, Col. 9, Lines, 25 –32].

Independent Claims 1, 18 and 31 by contrast include the limitation that a transition region is calculated. Applicant submits that the claimed calculated transition region is different than the gaps taught by Wang. A region is “an extensive, continuous part of a surface, space, or body.” [region. Dictionary.com. *Dictionary.com Unabridged (v 1.1)*. Random House, Inc. <http://dictionary.reference.com/browse/region> (accessed: September 17, 2008).]. Applicant respectfully submits that a gap, in the context used by Wang, is not a region but is rather a hole in the resulting image.

Further, Wang teaches that the these gaps are “removed.” [Wang, Col. 9, Lines 30-31]. Therefore, there is no transition region in Wang that is processed separately from the foreground and background. Applicant respectfully submits that the transition disclosed by Wang is a line upon which one side is the foreground region and the other side is the background region. Accordingly, there is no transition region as claimed in

Independent Claims 1, 18 and 31. Since there is no transition region, Applicant submits that Wang fails to achieve the advantages of being able to process each region differently to improve image quality as is provided by independent Claim 1. [*present Application*, Paragraph [0036]]. Accordingly, Applicant respectfully submits that independent Claim 1 is not obvious in view of Wang. Reconsideration and withdrawal of this rejection is respectfully requested.

Independent Claims 18 and 31 have been further amended to include the limitation step of defining or calculating incremental transition regions. Applicant submits that Wang also fails disclose, teach or suggest the calculation of an iterative transition regions. Applicant also respectfully submits that Wang fails to teach of a transition region having pixels that may be processed separately as discussed above. Accordingly, Applicant respectfully submits that Wang and Hong fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs and therefore independent Claims 18 and 30 are not obvious in view of Wang. Reconsideration and withdrawal of this rejection is respectfully requested.

With respect to Claims 2-5, 17, 19 - 22, 30, and 32-33 which depend, either directly or indirectly from independent Claims 1, 18 and 31 also incorporate all of the limitations of the parent claims. Accordingly, for the reasons set forth above with respect to independent Claims 1, 18 and 31, Applicant submits that dependent Claims 2-5, 17, 19 - 22, 30, and 32-33 are not obvious in light of Wang. Reconsideration and withdrawal of this rejection is respectfully requested.

Dependent claims 6, 13-16, 23-27 were further rejected as being obvious in view of Wang in light of Hong. As discussed above, Wang fails to teach, disclose or suggest the claimed limitation of a calculated transition region that is separately processed from the foreground and background regions. Wang further does not disclose the calculating of

incremental transition regions. Applicant respectfully submits that Hong fails to cure these deficiencies.

Hong teaches a method of segmenting a pixilated image and uses a morphological filter to decrease false foreground detection. Hong then classifies each block of pixels as being in the foreground image or the background image. [Hong, Paragraph [0020], Paragraph [0088]]. Thus, similar to Wang, Hong does not calculate a transition region that is processed separately from the foreground image or background image. At best, combination of Wang and Hong would provide for the processing of a foreground and a background image separately. Thus the proposed combination fails to operate as the claimed invention performs since each of the three regions cannot be treated differently to improve image quality. Accordingly, Applicant submits that dependent claims 6, 13-16, 23-27 are not obvious in view of Wang in light of Hong. Reconsideration and withdrawal of this rejection is respectfully requested.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, fail to teach a modification to prior art that does not render the prior art being modified unsatisfactory for its intended purpose, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the forgoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §112, second paragraph and 35 U.S.C. §103(a), have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

The Applicants believe that all pending claims are in condition for allowance and such action is earnestly requested. If the present amendments and remarks do not place the Application in a condition for allowance, the Examiner is cordially invited to contact the undersigned so that any such issues may be promptly resolved.

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

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